

Notice of Allowability

Application No.

10/830,072

Applicant(s)

KAWASE ET AL.

Examiner

Art Unit

Jean E. Lesperance

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed April 23, 2004.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

DETAILED ACTION

1. The application filed April 23, 2004 is presented for examination and claims 20 are pending.

Allowable Subject Matter

2. Claims 1 to 20 are allowed.
3. The following is an examiner's statement of reasons for allowance: the claimed invention is directed to a liquid crystal display device.

Independent claim 1 identifies a uniquely distinct feature "a first voltage generation circuit coupled to the first terminal and second terminal, for generating a first voltage higher than the first reference voltage and a second voltage generation circuit coupled to the first terminal and second terminal, for generating a second voltage lower than the second reference voltage, wherein a voltage supplied to the fourth terminal is changed from the second voltage to the third reference voltage and subsequently, changed from the third reference voltage to the first voltage".

Independent claim 4 identifies a uniquely distinct feature "a first voltage generation circuit coupled to the first terminal and second terminal, for generating a first voltage higher than the first reference voltage and a second voltage generation circuit coupled to the first terminal and second terminal, for generating a second voltage lower than the second reference voltage, wherein a voltage supplied to the fourth terminal is

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changed from the first voltage to the second reference voltage and subsequently, changed from the second reference voltage to the second voltage”.

Independent claim 7 identifies a uniquely distinct feature “wherein the first common voltage generation circuit or the second common voltage generation circuit controls such that the first common voltage or the second common voltage is changed from the second voltage to the third reference voltage, and subsequently, changed from the third reference voltage to the first voltage when the first common voltage generation circuit or the second common voltage generation circuit generates the first common voltage supplied to the fourth terminal or the second common voltage supplied to the fifth terminal”.

Independent claims 12 and 13 identify a uniquely distinct feature “wherein the respective common voltages form a voltage waveform having an inflection point in the vicinity of a third potential point between a first potential and a second potential different from the first potential when a potential on an external terminal makes a transition from the first potential to the second potential”. None of the prior arts teaches the above limitations as shown in the voltage waveform of Figure 18 of the present invention.

Independent claim 18 identifies a uniquely distinct feature “a first voltage generation circuit coupled to the first terminal and second terminal, for generating a first voltage higher than the first reference voltage and a second voltage generation circuit coupled to the first terminal and second terminal, for generating a second voltage lower than the second reference voltage, wherein a voltage supplied to the third terminal is

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changed from the second voltage to the first reference voltage, and subsequently, changed from the first reference voltage to the first voltage".

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nishikubo et al. (Patent # 6,831,620) and Fukumoto et al. (7,151,518).

The closest arts, Nishikubo et al. and Fukumoto et al. as discussed above, either singularly or in combination, fail to anticipate or render obvious the above limitations obvious.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean Lesperance whose telephone number is (571) 272-7692. The examiner can normally be reached on from Monday to Friday between 10:00AM and 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

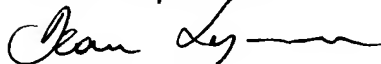
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(571) 273-8300 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Jean Lesperance



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Date 3/29/2007



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
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